

Attorney Docket No. P12916-US1
Customer Number 27045

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1-19. (Canceled)

20. (Currently Amended) A method of synchronizing nodes of a telecommunication network in which a master node is coupled to a Primary Reference Clock (PRC) and a plurality of slave nodes are arranged to synchronize their internal clocks to the PRC using data received on incoming data links, the method comprising:

propagating Synchronization Status Messages through the network from the master node, said propagating step including:

with in each given slave node through which a Message passes, modifying the Message by incorporating into the Message, an its-own identity of the given slave node, thereby generating in each Message, a path and path length which has been followed by the Message; and

in slave nodes that are not neighboring nodes of the master node, delaying a predefined time period after receiving a Message before transmitting the modified message to a next slave node in the network;

in each slave node that receives a Message, registering the path or path length of the received message as an attribute for the incoming data link on which the Message was received; and

if multiple Messages are received on different incoming data links in a given slave node, selecting by the given slave node, an incoming data link having an attribute indicating the shortest path length from the master node as the link on which to synchronize.

~~waiting a predetermined amount of time to introduce an additional delay in the propagation of the Messages in at least certain of the network nodes; and~~

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~~for each of at least some of the incoming links of each node, registering a path or path length of a Synchronization Status Message received on that link as an attribute for that link.~~

21. (Canceled)

22. (Currently Amended) The method claim 20, further comprising propagating Synchronization Status Messages ~~[[on]]~~ upon initializing a new network.

23. (Previously Presented) The method of claim 20, further comprising sending Synchronization Status Messages at intervals to enable the network to cope with dynamic changes in network architecture.

24. (Previously Presented) The method of claim 20, wherein Synchronization Status Messages are generated in response to receipt at the master node of a Synchronization Status Request Message sent from another network node.

25. (Previously Presented) The method of claim 20, further comprising generating a Synchronization Status Message at a slave node in response to receipt at that slave node of a Synchronization Status Request Message sent from a neighboring slave node, with the Synchronization Status Message including an identification of the path over which the sending slave node has been synchronized.

26. (Previously Presented) The method of claim 20, wherein a node through which a Synchronization Status Message passes adds to the Message its own distance from the master node and, for each incoming link, a node registers the distance included in a Synchronization Status Message received on that link as an attribute for that link.

27. (Previously Presented) The method of claim 20, wherein the network is a UMTS network.

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28. (Currently Amended) The method of claim 20, wherein the ~~additional delay~~ introduced predefined time period delayed by a slave node is the same for all slave nodes ~~which introduce an additional delay that are not neighboring nodes of the master node.~~

29. (Currently Amended) The method of claim 20, wherein the ~~additional delay~~ predefined time period delayed by a slave node increases with increasing distance from the master node.

30. (Currently Amended) The method of claim 20, wherein the ~~additional delay~~ to be introduced predefined time period delayed by a slave node ~~for a Synchronization Status Message~~ is identified in the Synchronization Status Message.

31. (Currently Amended) The method of claim 20, wherein the ~~additional delay~~ to be introduced predefined time period delayed by a slave node ~~for a Synchronization Status Message~~ is defined by an additional delay table stored at the node.

32. (Currently Amended) A telecommunications network, comprising a master node coupled to a Primary Reference Clock (PRC) and a plurality of slave nodes, each of the slave nodes being arranged to synchronize its internal clock to the PRC using data received on an incoming data link, and each of the slave nodes comprising:

means for receiving on an incoming link to the slave node, a Synchronization Status Message incorporating identities of the slave nodes through which the Message has passed;

means for registering a path or path length of the Synchronization Status Message as an attribute for the link on which it was received;

means for modifying a received Message by incorporating into [[a]] the received Message, the identity of the receiving slave node, thereby generating in the Message, a path and path length which has been followed by the Message; and

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means for propagating a Synchronization Status Message having an incorporated identity to a neighboring next slave node in the network using an outgoing link, wherein at least some of the slave nodes in the network that are not neighboring nodes of the master node are configured to wait a predetermined time to introduce an additional delay in the propagation of the respective Messages having incorporated identities delay a predefined time period after receiving a Message before transmitting the modified message to a next slave node in the network.

33. (Currently Amended) A slave node for use in a multi-node telecommunications network having a master node coupled to a Primary Reference Clock (PRC) and a plurality of slave nodes, comprising:

means for receiving on an incoming link to the node, a Synchronization Status Message incorporating identities of nodes through which the Message has passed;

means for registering a path or path length of a Synchronization Status Message as an attribute for the link on which it was received;

means for modifying a received Message by incorporating into [[a]] the received Message, an identity of the node, thereby generating in the Message, a node path and path length which has been followed by the Message and forming a modified Message; and;

means for propagating the modified Message to neighboring nodes using outgoing links, after waiting a predefined additional time delay; and

means responsive to receiving multiple Messages on different incoming links, for selecting an incoming link having an attribute indicating the shortest path length from the master node as the link on which to synchronize.

34. (Currently Amended) A method of synchronizing nodes of a telecommunication network in which a master node is coupled to a Primary Reference Clock (PRC) and a plurality of slave nodes are arranged to synchronize their internal clocks to the PRC using data received on incoming data links, the method comprising:

propagating Synchronization Status Messages through the network from the master node, with each slave node through which a Message passes incrementing a

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distance counter contained in the Message, thereby generating in each Message a path length taken by the Message;

waiting a predetermined amount of time to introduce an additional delay in the propagation of the Messages ~~at least certain of the network nodes~~ in slave nodes that are not neighboring nodes of the master node; and

for each of at least some of the incoming links of each slave node, registering the path length of a Synchronization Status Message received on a link as an attribute for that link; and

if multiple Messages are received on different incoming links in a given slave node, selecting by the given slave node, an incoming link having an attribute indicating the shortest path length from the master node as the link on which to synchronize.

35-38. (Canceled).